

# Health Care Financing

## Notes



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### **Medicare: Use and reimbursement for aged persons by survival status, 1979**

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#### **Overview**

This *Note* presents data on the distribution of Medicare reimbursements in 1979 to aged enrollees (i.e., 65 years of age and over) by the amounts distributed to individuals. Particular emphasis is given to comparing amounts distributed to aged Medicare enrollees who died in 1979 to the amounts distributed to enrollees who survived the year. The amounts distributed are examined for all program benefits and, separately, for the hospital insurance (HI) and the supplementary medical insurance (SMI) programs. This *Note* describes data on the distribution of Medicare reimbursements by the amounts reimbursed per person over the range from zero to \$20,000 or more.

Reimbursements to persons who died during the year should not be interpreted as reflecting the program's full costs of services to persons who are dying. In this *Note*, data for decedents are limited to the calendar year in which they died. Thus, they had an average of 6 months of exposure in 1979 while survivors had 12 months of exposure. Aged enrollees who died in 1979 (1.3 million) represented 4.9 percent of all aged persons enrolled for Medicare benefits during the year, but they accounted for 21 percent of the benefits distributed. This proportion of benefits distributed on behalf of aged persons dying during the year is similar to the 22 percent found by another study in 1967 and 1968 (Piro and Lutins, 1973). A more recent study (Lubitz, Gornick, and Prihoda, 1981) found that aged persons in the last year of life accounted for about 28 percent of program expenditures on behalf of the aged in 1976.<sup>1</sup>

**NOTE:** The statistical files are developed and maintained by the Office of Statistics and Data Management, Bureau of Data Management and Strategy. Programming services for table production were provided by Vikki Latta, Betty Gunn, and Cheryl Black.

The Medicare program consists of two coordinated health insurance benefit packages. Part A, or hospital insurance (HI), provides a basic plan affording protection against the costs of hospital and related services. Part B, or supplementary medical insurance (SMI), provides a voluntary plan covering payments for physicians' services and other related medical and health services.

Medicare enrollees become eligible to receive reimbursements or to have them paid on their behalf when they file claims that show they have incurred covered charges that exceed the applicable Medicare deductibles. Under the HI program, the deductible changes each year to approximate the average current cost for 1 day in a hospital. In 1979, the HI deductible for each benefit period was \$160. A benefit period starts with the first day of hospitalization and ends when a person has not been an inpatient in a hospital or skilled nursing facility (SNF) for 60 consecutive days. There is no limit to the number of benefit periods an enrollee may have.

The HI program pays for most of the costs of covered inpatient hospital care and related health services provided by SNFs and home health agencies (HHAs) following a period of hospitalization.<sup>2</sup>

Under the SMI program, the deductible from 1973 through 1981 was the first \$60 of covered charges incurred during each calendar year. Beginning on January 1, 1982, the SMI deductible increased to \$75. The SMI program covers a variety of medical services and supplies furnished by physicians or others in connection with physician services, outpatient services, and HHA services.

Table 1 shows the distribution of aged enrollees and amounts reimbursed for HI and/or SMI services by survival status and selected reimbursement categories.

Table 2 shows the distribution of aged enrollees and amounts reimbursed for HI services by survival status and selected reimbursement categories.

<sup>1</sup>This study measured Medicare use in 1976 of all persons who died in 1976 as well as the experience in those months in 1976 that belonged to the last year of 1977 decedents whose last year of life began in 1976.

<sup>2</sup>The Omnibus Reconciliation Act of 1980 (Public Law 96-499) eliminated the 3-day prior hospitalization requirement for HHA services under HI, eliminated the deductible for HHA services under SMI, and provided for coverage of an unlimited number of home health visits.

Table 3 shows the distribution of aged enrollees and amounts reimbursed for SMI services by survival status and selected reimbursement categories.

## Highlights

**Table 1:**

- In 1979, about 58 percent (15.2 million) of all aged Medicare beneficiaries enrolled during the year (26.4 million) received some reimbursement. Conversely, 42 percent received no Medicare reimbursements. The distribution of Medicare benefits was highly skewed.
- Among the enrollees, 61 percent received less than \$100 and accounted for only 0.9 percent of all reimbursements. In contrast, about 5 percent received \$5,000 or more and accounted for more than 57 percent of total reimbursements.
- Medicare enrollees who died during 1979 accounted for about 5 percent of all aged persons eligible for benefits, but they received close to 21 percent of total reimbursements.
- As expected, compared to survivors, there was a larger proportion of decedents whose reimbursements were \$5,000 or more, and there was a much smaller proportion whose reimbursements were less than \$100.
- About 28 percent of all enrollees who died received \$5,000 or more in reimbursements. More than 76 percent of the reimbursements distributed to decedents went to those receiving \$5,000 or more. Among enrollees who survived, only 4 percent received \$5,000 or more in benefits, accounting for 53 percent of the total received by survivors.
- Only 16 percent of the enrollees who died received no reimbursements. An additional 8 percent received less than \$100. The comparable figures for survivors were 44 and 19 percent, respectively.
- The mean reimbursement per enrollee for decedents (\$3,904) was 5.1 times greater than that for survivors (\$770).

**Table 2:**

- The distribution of HI benefits for aged persons was skewed towards persons receiving higher levels of reimbursement. About 4 percent of those persons eligible for HI services received \$5,000 or more and accounted for 54 percent of total HI reimbursements. Of the HI enrollees, 78 percent received no HI benefits.
- While enrollees who died accounted for about 21 percent of total Medicare reimbursements, they comprised 24 percent of HI reimbursements. This suggests a disproportionately high use of institutional services (i.e., hospitals and skilled nursing facilities) by decedents.
- As expected, decedents received larger HI benefit payments than survivors. About 23 percent of the enrollees who died received HI reimbursements of \$5,000 or more and accounted for 71 percent of the benefit payments; for survivors, the comparable figures were 3 percent and 49 percent, respectively.

- The mean HI reimbursement per enrollee who died (\$3,201) was 6 times greater than that for survivors (\$530).

**Table 3:**

- The distribution of SMI benefits for aged persons was skewed towards the lower end of the distribution of reimbursements.
- About 97 percent of the enrollees received less than \$2,000 and accounted for 68 percent of total reimbursements. About 39 percent received no SMI reimbursements and an additional 21 percent received less than \$100. Thus, 60 percent of the enrollees accounted for only 3 percent of reimbursements. Persons receiving \$5,000 or more in SMI benefits accounted for less than 1 percent of all enrollees and less than 8 percent of the amounts reimbursed.
- While decedents accounted for 21 percent of total Medicare reimbursements, they received only 13 percent of SMI reimbursements.
- SMI benefit payments were, as expected, higher for decedents than survivors. About 10 percent of the beneficiaries dying during 1979 received \$2,000 or more and received 46 percent of reimbursements; for survivors, the figures were about 2 percent and 30 percent, respectively.
- The mean SMI reimbursement per enrollee for decedents (\$761) was nearly three times as large as that for survivors (\$268).

## Technical notes

### Sources and limitations of data

Data for this report come from bills of the HI program and from payment records of the SMI program received by the Health Care Financing Administration. Separate files for HI services (inpatient hospital, skilled nursing facility, and home health agency) and SMI services (physician, outpatient, and home health agency) are created from the detailed bill records that contain reimbursement amounts. Bills without reimbursement are not included.

Each of the selected files is sorted individually and then merged to produce one combined, sorted, bill record file for aged beneficiaries. This combined file is processed against a cross-reference file to combine information for one person who may have bills under two HI claim numbers. This file is then summarized by person to aggregate all reimbursed services for that person during the year.

The data shown for 1979 are for services performed in that year and recorded in HCFA by December 1980. Data for aged beneficiaries are based on a 5-percent sample of the billing records. Counts are multiplied by 20 to obtain the estimates of totals shown in the tables.

Persons are counted once for each type of coverage (HI or SMI) used, regardless of the actual number of services used. Thus, a person who received both HI and

SMI services is counted as receiving both of these services but is counted only once for all services under the Medicare program.

Survival status is determined based on whether or not the beneficiary died during the reporting year.

## Reliability of estimates

Tables 4 and 5 show approximate standard errors for estimates. The standard error is primarily a measure of sampling variability; that is, the variation that occurs by chance because a sample rather than the whole population is used. To calculate standard errors at reasonable costs, approximation methods were used. Thus, these

tables are only indicators of the order of magnitude of standard errors for specific estimates. In general, estimates for small subgroups and percentages with small bases tend to be relatively unreliable.

## References

Lubitz, J., Prihoda, R., and Gornick, M.: Use and Costs of Medicare Services in the Last Year of Life. *Working Paper Series*. Office of Research and Demonstrations, Health Care Financing Administration, Sept. 1981.

Piro, P., and Lutins, T.: *Utilization and Reimbursements Under Medicare for Persons who Died in 1967 and 1968*. DHEW Pub. No. (SSA) 74-11702. Social Security Administration, Oct. 1973.

Table 1

**Distribution of aged Medicare enrollees and amounts reimbursed for hospital insurance and/or supplementary medical insurance services, by survival status and reimbursement category: United States, 1979**

Reimbursement category	Total		Decedents		Survivors	
	Number of enrollees in thousands	Amount reimbursed in millions	Number of enrollees in thousands	Amount reimbursed in millions	Number of enrollees in thousands	Amount reimbursed in millions
<b>Total</b>	26,362	\$24,309	1,281	\$5,001	25,081	\$19,308
\$0	11,141	0	201	0	10,940	0
\$1-99	4,829	214	97	4	4,732	210
\$100-499	4,372	1,000	144	38	4,228	962
\$500-999	1,235	892	87	64	1,148	828
\$1,000-1,999	1,467	2,145	132	196	1,335	1,949
\$2,000-4,999	1,905	6,113	266	891	1,639	5,222
\$5,000-9,999	947	6,585	212	1,503	735	5,082
\$10,000-14,999	281	3,390	81	984	200	2,406
\$15,000-19,999	104	1,774	34	580	70	1,194
\$20,000 or more	81	2,196	27	741	54	1,455
Mean reimbursement per enrollee	—	\$ 922	—	\$ 3,904	—	\$ 770
Percent distribution						
<b>Total</b>	100.0	100.0	100.0	100.0	100.0	100.0
\$0	42.3	0.0	15.7	0.0	43.6	0.0
\$1-99	18.3	0.9	7.6	0.1	18.9	1.1
\$100-499	16.6	4.1	11.2	0.8	16.9	5.0
\$500-999	4.7	3.7	6.8	1.3	4.6	4.3
\$1,000-1,999	5.5	8.8	10.3	3.9	5.3	10.1
\$2,000-4,999	7.2	25.2	20.8	17.8	6.5	27.0
\$5,000-9,999	3.6	27.1	16.5	30.0	2.9	26.3
\$10,000-14,999	1.1	13.9	6.3	19.7	0.8	12.5
\$15,000-19,999	0.4	7.3	2.7	11.6	0.3	6.2
\$20,000 or more	0.3	9.0	2.1	14.8	0.2	7.5

SOURCE: Bureau of Data Management and Strategy, Health Care Financing Administration: Medicare statistical files.

Table 2

**Distribution of aged Medicare enrollees and amounts reimbursed for hospital insurance services, by survival status and reimbursement category: United States, 1979**

Reimbursement category	Total		Decedents		Survivors	
	Number of enrollees in thousands	Amount reimbursed in millions	Number of enrollees in thousands	Amount reimbursed in millions	Number of enrollees in thousands	Amount reimbursed in millions
<b>Total</b>	25,939	\$17,136	1,266	\$ 4,053	24,673	\$13,083
\$0	20,241	0	391	0	19,850	0
\$1-99	114	5	30	1	84	4
\$100-499	782	245	76	22	706	223
\$500-999	974	720	81	61	893	659
\$1,000-1,999	1,268	1,840	135	200	1,133	1,640
\$2,000-4,999	1,565	5,005	266	888	1,299	4,117
\$5,000-9,999	700	4,835	186	1,306	514	3,529
\$10,000-14,999	187	2,258	62	752	125	1,506
\$15,000-19,999	64	1,088	23	387	41	701
\$20,000 or more	43	1,140	16	436	27	704
Mean reimbursement per enrollee	—	\$ 661	—	\$ 3,201	—	\$ 530
Percent distribution						
<b>Total</b>	100.0	100.0	100.0	100.0	100.0	100.0
\$0	78.0	0.0	30.9	0.0	80.4	0.0
\$1-99	0.4	( <sup>1</sup> )	2.4	( <sup>1</sup> )	0.3	( <sup>1</sup> )
\$100-499	3.0	1.4	6.0	0.5	2.9	1.7
\$500-999	3.8	4.2	6.4	1.5	3.6	5.0
\$1,000-1,999	4.9	10.7	10.6	4.9	4.6	12.5
\$2,000-4,999	6.0	29.2	21.0	21.9	5.3	31.5
\$5,000-9,999	2.7	28.2	14.7	32.2	2.1	27.0
\$10,000-14,999	0.8	13.2	4.9	18.6	0.5	11.5
\$15,000-19,999	0.2	6.3	1.8	9.6	0.2	5.4
\$20,000 or more	0.2	6.7	1.3	10.8	0.1	5.4

<sup>1</sup>Less than 0.05 percent.

SOURCE: Bureau of Data Management and Strategy, Health Care Financing Administration: Medicare statistical files.

**Table 3**  
**Distribution of aged Medicare enrollees and amounts reimbursed for supplementary medical insurance services, by survival status and reimbursement category: United States, 1979**

Reimbursement category	Total		Decedents		Survivors	
	Number of enrollees in thousands	Amount reimbursed in millions	Number of enrollees in thousands	Amounts reimbursed in millions	Number of enrollees in thousands	Amount reimbursed in millions
<b>Total</b>	24,489	\$7,173	1,245	\$948	23,244	\$6,225
\$0	9,448	0	209	0	9,239	0
\$1-99	5,171	234	162	8	5,009	226
\$100-499	5,951	1,438	357	97	5,594	1,341
\$500-999	1,914	1,365	208	151	1,706	1,214
\$1,000-1,999	1,334	1,856	184	260	1,150	1,596
\$2,000-4,999	605	1,736	111	324	494	1,412
\$5,000-9,999	54	339	12	76	42	263
\$10,000-14,999	4	53	1	14	3	39
\$15,000-19,999	4	57	1	10	3	47
\$20,000 or more	4	95	( <sup>1</sup> )	8	4	87
Mean reimbursement per enrollee	—	\$293	—	\$761	—	\$268
Percent distribution						
<b>Total</b>	100.0	100.0	100.0	100.0	100.0	100.0
\$0	38.6	0.0	16.8	0.0	39.7	0.0
\$1-99	21.1	3.3	13.0	0.8	21.5	3.6
\$100-499	24.3	20.1	28.7	10.2	24.1	21.5
\$500-999	7.8	19.0	16.7	15.9	7.3	19.5
\$1,000-1,999	5.4	25.9	14.8	27.4	4.9	25.6
\$2,000-4,999	2.5	24.2	8.9	34.2	2.1	22.7
\$5,000-9,999	0.2	4.7	1.0	8.0	0.2	4.2
\$10,000-14,999	( <sup>2</sup> )	0.7	( <sup>2</sup> )	1.5	( <sup>2</sup> )	0.7
\$15,000-19,999	( <sup>2</sup> )	0.8	( <sup>2</sup> )	1.1	( <sup>2</sup> )	0.8
\$20,000 or more	( <sup>2</sup> )	1.3	( <sup>2</sup> )	0.9	( <sup>2</sup> )	1.4

<sup>1</sup>Less than 500 persons.

<sup>2</sup>Less than 0.05 percent.

SOURCE: Bureau of Data Management and Strategy, Health Care Financing Administration: Medicare statistical files.

**Table 4**

**Approximate standard error estimates of number of persons using reimbursed services under Medicare**

Estimated number of persons in thousands	Standard error
1	138
5	308
10	436
25	689
50	974
100	1,375
150	1,682
200	1,940
250	2,167
500	3,046
1,000	4,255
2,000	5,868
3,000	6,998
4,000	7,857
5,000	8,527
6,000	9,050
7,000	9,451
8,000	9,774
9,000	9,940
10,000	10,043
11,000	10,057
12,000	9,982
13,000	9,816

**Table 5**

**Approximate relative standard error of amounts reimbursed under Medicare**

Estimated number of persons served in thousands	Amount reimbursed		
	HI and SMI	HI	SMI
1	26.0	20.5	24.8
5	11.6	9.2	11.1
10	8.2	6.5	7.9
25	5.2	4.1	5.0
50	3.7	2.9	3.5
100	2.6	2.0	2.5
150	2.1	1.7	2.0
200	1.8	1.4	1.8
250	1.6	1.3	1.6
500	1.2	.91	1.1
750	.94	.74	.90
1,000	.82	.64	.78
2,000	.57	.45	.55
3,000	.47	.36	.44
4,000	.40	.31	.38
5,000	.36	.27	.34
6,000	.32	.25	.31
7,000	.30	.23	.28
8,000	.28	.21	.26
9,000	.26	.19	.24



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